National Institute of Environmental Health Sciences

Ecology and conservation of ginseng (Panax quinquefolius) in a changing world

Author(s): McGraw JB, Lubbers AE, Van der Voort M, Mooney EH, Furedi MA, Souther S, Turner JB, Chandler J

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Abstract:

American ginseng (Panax quinquefolius L.) is an uncommon to rare understory plant of the eastern deciduous forest. Harvesting to supply the Asian traditional medicine market made ginseng North America's most harvested wild plant for two centuries, eventually prompting a listing on CITES Appendix II. The prominence of this representative understory plant has led to its use as a phytometer to better understand how environmental changes are affecting many lesser-known species that constitute the diverse temperate flora of eastern North America. We review recent scientific findings concerning this remarkable phytometer species, identifying factors through its history of direct and indirect interactions with humans that have led to the current condition of the species. Harvest, deer browse, and climate change effects have been studied in detail, and all represent unique interacting threats to ginseng's long-term persistence. Finally, we synthesize our current understanding by portraying ginseng's existence in thousands of small populations, precariously poised to either escape or be drawn further toward extinction by the actions of our own species.

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Resource Description

Exposure : ☑

weather or climate related pathway by which climate change affects health

Ecosystem Changes

Geographic Feature: ☑

resource focuses on specific type of geography

Other Geographical Feature

Other Geographical Feature : Forest

Geographic Location: ☑

resource focuses on specific location

United States

Health Impact: ☑

specification of health effect or disease related to climate change exposure

Health Outcome Unspecified

Resource Type:

format or standard characteristic of resource

Review

Timescale:

time period studied

Time Scale Unspecified